

# BAL TIC 58

## DESIGN SPECIFICATION (PRELIMINARY)

### SLOOP RIGGED RACER/CRUISER

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#### MAIN DIMENSIONS

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L.O.A.	17.831 m	58.50 ft
D.W.L.	14.500 m	47.57 ft
BEAM	5.066 m	16.62 ft
DRAFT	3.200 m	10.50 ft
DISPL.	19000 kg	41900 lbs
BALLAST	8100 kg	17860 lbs
I	23.35 m	76.61 ft
J	6.650 m	21.82 ft
P	20.850 m	68.41 ft
E	7.025 m	23.05 ft

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All measurements are approximate.

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## **1. HULL**

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### **1.10 GENERAL CONSTRUCTION**

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FRP sandwich construction to the highest specification, using unidirectional rovings and high grade resin to develop an extremely rigid yet light and well insulated structure.

The core material is aircraft-grade Balsa, type CK57. CK57 is lighter than standard balsa. (It has a specific weight of 110 kg/m<sup>3</sup> (6,9 lbs/ft<sup>3</sup>) compared to 155 kg/m<sup>3</sup> (9,7 lbs/ft<sup>3</sup>) of the latter).

Time and experience have revealed that the very best hull laminate incorporates a hybrid unidirectional roving consisting of a combination of Kevlar and glass fibres. This proven system is refined and used on the BALTIC 58.

The resin used in the laminates is a modified Isophthalic polyester with higher impact strength, toughness, elongation to break (more crack resistant), and higher water resistant than of the conventionally used resins.

This combination of sandwich construction, unidirectional Kevlar/Glass fibres and high-grade resin will result in laminates with significant weight reduction but also added strength and durability compared to conventional laminates.

All high stress areas are specially strengthened with a build up of unidirectional rovings orientated in the direction of the stress.

Transverse floors and longitudinal stringers are made up of a unidirectional roving and fabmat around a low density PVC foam core.

Finishing :

Hull outside painted with high quality abrasion-resistance colour pigment gelcoat. Standard hull colour is white. Hull inside to be topcoated white or dark brown.

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### **1.11 STRUCTURAL BULKHEADS**

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Main structural bulkheads are built up of a balsa core GRP sandwich construction. Visible surfaces are teak faced. Other bulkheads are teak faced plywood.

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### **1.12 CHAIN PLATES**

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Stainless steel through bolted to longitudinal or transverse bulkheads, which are securely bonded to the hull and deck. Plates are provided with backing plates to spread loads adequately. Chain plates are grounded to a keel bolt for lightning protection.

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### **1.13 ENGINE BEDS**

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Incorporated in hull, built up of ud-roving and fabmat around a PVC foam core. Special care is taken to ensure a rigid foundation and correct bonding.

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### **1.14 MAST STEP**

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Fabricated aluminium alloy mast step bolted to reinforced floors and stringers. A hydraulic mast jack is included.

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### **1.15 BILGE**

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Deep keel bilge. Access provided as practical to the bilge. There are limber holes in the floor frames to allow drainage to the sump.

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### **1.16 BALLAST**

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External fin keel, cast to high accuracy, in lead strengthened with antimony.

The shape of the keel has been developed with the emphasis of lowering the ballast center-of-gravity as much as possible without adding drag or decreasing lift. The lower center of gravity gives higher stability with added speed and power but also makes the boat easier to handle. A lower center of gravity also increases the boats resistance against knock downs hence making the boat safer and adds seaworthiness.

The keel is through bolted to the hull by cast-in stainless steel bolts.

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### **1.17 RUDDER AND RUDDER STOCK**

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The cantilevered semi-elliptical balanced spade rudder is moulded from Fiberglas and filled with PVC-foam. Foam filling under high pressure in special strengthened mould.

Rudder Stock :

The rudder stock is made of high strength, S-glass - Epoxy construction using "Vacu-Press" manufacturing system. The rudder stock is tapered and dimensioned to the corresponding bending moments in order to minimise weight. The rudder stock passes through self aligning roller bearings and a stuffing box which is strongly bounded to the hull.

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## **2. DECK AND DECK EQUIPMENT**

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Deck layout according to Baltic Yachts drawing, version 1

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## **2.10 GENERAL CONSTRUCTION**

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Hand laid-up moulded fibreglass with balsa core for stiffening and insulation and a high density core reinforcement incorporated in the mounting areas of winches and fittings. The deck has a high strength/weight ratio and is bonded to the hull with layers of roving. The deck is through bolted to the hull.

A pulpit and pushpit of high quality stainless steel tube are mounted on the bow and transom. Double life lines are installed passing through stainless steel stanchions. The life lines are of plastic coated stainless steel wire and set up with turnbuckles at the after end. The pulpit is fitted with navigation lights and the pushpit with a stern light. The height of pulpits, stanchions, spacing distance etc. conforms to O.R.C. requirements.

Stainless steel handrail for main companionway is provided. Sprayhood for main companionway, made of waterproof and sun resistant canvas, cover for sprayhood in down position. High quality marine standard hardware and fastenings used throughout.

Finishing :

Deck is painted with high quality abrasion-resistance colour pigment gelcoat. Standard colour is white.

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## **2.11 STEM HEAD FITTING**

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Custom fabricated stainless steel fitting provided with anchor roller and genoa tack fittings.

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## **2.12 TOE RAIL**

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Toerail to be in teak. T-track recessed on top of toerail, aft of mast, for multi-purpose sheet take-off points.

Stainless steel stanchion bases with strong eyes for sheet take-off points.

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## **2.13 WINDOWS, HATCHES AND PORTLIGHTS**

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Fixed Windows :

Windows in cabin trunk are fixed and made of perspex, securely attached and sealed off to the deck.

Sliding Hatches :

Companionway hatches are custom made, perspex with lock and washboards. Storage space for washboard.

Hatches and Portlights :

-Foredeck	1
-Forward cabins	1 + 1
-Main saloon	2
-Pentry, nav.station	1 + 1
-Toilets	1 + 1 + 1
-Owner's suite	1
	2 cockpit portlights
-Aft cabin	1

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## **2.14 MAIN SHEET SYSTEM**

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Main sheet track and traveller. One boom block Twin blocks on traveller. Two X-haul blocks and two X-haul cheek blocks.

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## **2.15 GENOA SHEETING SYSTEM**

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Four genoa tracks, Baltic Yachts custom or equal. Four genoa cars and two padeye cars.

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## **2.16 BLOCKS, JAMMERS and FITTINGS**

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- double sheave foot blocks
- foreguy snatch blocks
- foreguy turning blocks
- halyard blocks
- triple fairlead blocks
- spreacher blocks
- removable aftguy blocks
- runner blocks
- extra snatch blocks
  
- jammers for trimlines

- mooring cleats
- halyard cleats
- primary cleats
- secondary cleats

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## 2.17 WINCH SPECIFICATION

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Winch equipment Lewmar or equal.

Primaries/ genoa sheet	2 x 77-3AST
Secondaries/ spinnaker sheet	2 x 66 AST
Mainsheet	1 x 54 AST
X-haul	1 x 44 AST
Genoa halyards	2 x 58 CST
Spinnaker halyard	1 x 54 AST
Main halyard	1 x 48 AST
Reefs, cunningham etc.	2 x 44 AST

Following handles are standard:

3 x double lock-in	10"
3 x lock-in	10"

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## 3. INTERIOR

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### 3.10 GENERAL

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Joinery work is to the highest standard. All joinery is teak faced with solid teak or laminated teak frames and capping. The joinery is varnished throughout. Visible surfaces are varnished and handrubbed to obtain a satin type of surface.

All doors are provided with retaining hooks and swing stops. Kick plates on steps and chafing pieces on sills are provided. Canvas leecloths provided for berths in owner's stateroom and guest cabins. Curtains are provided for side windows and portlights, quality and colour for curtains according to samples. Hanging lockers are provided with rods and hooks. Locker doors are fitted with louvers for ventilation. Teak gratings in head.

Floorboards with laid teak veneer. Access to bilge provided where practical. Dust collector with teak grating in front of main entrance ladder. Ceiling lined with removable soft panelling.

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### 3.11 INTERIOR LAY-OUT

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Description refers to Baltic Yachts interior layout alternative 1.

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### **3.12 FORWARD**

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Storage space for sails, rigging equipment, pipe for sheets. Hull is white topcoated. Various layouts are possible on request.

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### **3.13 FORWARD GUEST CABINS**

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Two guest cabins with privacy. Cabins provided with upper and lower berths, hanging locker, drawers and storage space. Berths have mattresses and leeboards.

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### **3.14 TOILET COMPARTMENT**

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Moulded GRP basin in special hygienic gelcoat. Counter unit and lockers with ample provision for stowage. Foot-operated fresh water pump. Marine toilet with overboard discharge through seacock. Additional close-off valve installed immediately after toilet for added safety and prevented back flow. Mirror, toothbrush, towel, soap and paper holder. Telephone type shower, water faucet for cold and hot pressurised water, shower sump with sump pump.

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### **3.15 GALLEY AREA**

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Galley provided with 4 burner gimbaled propane stove with oven. Galley fan above. Stowage for propane under helmsman's seat. Remote solenoid valve. The shut-off at the tank is operated from galley, a mechanical shut-off is at the stove. A microwave oven of high quality is also provided.

Stowage for cooking utensils. Adequate drawers and glass racks for stowage of crockery. Baltic Yachts service-set is provided. Two stainless steel thermos bottle. Two oven gloves and pot stands. Cutting-board. Corian-covered work top with deep fiddles. Deep stainless steel sink units. Drying locker for dishes above, garbage container under. Foot operated sea-water pump. Foot operated fresh water pump. Water faucet for hot and cold pressure water. Custom made stainless steel refrigerator and freezer compartments, compressor unit to be belted off the main engine. Cooling plates to be accumulating type.

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### **3.16 NAVIGATION STATION**

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Navigation area with stowage for charts, books, pencils etc. Additional chart stowage under deck. Bulkhead space for mounting electronic instruments, radio equipment, etc.

Master electric panel with safety circuit breakers and navigator's light. Navigator's belt.

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### **3.17 MAIN SALON**

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Dining area to port with dining table and settees. Storage space behind settee backrests. Bookshelves and lockers Curtains for side windows.

A bar and entertainment center to stb with lockers and drawers. Corian covered work top. Rack for glasses and bottles. One set of glasses is provided. Space for TV, Video, Stereo, etc. One high quality CD-player and tuner is provided. Speakers in main salon and center cockpit.

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### **3.18 OWNER'S SUITE**

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One king-size berth. One big hanging locker, settee to port, bookshelf, drawers and lockers.

Vanity table with chair, mirror above table and storage space for cosmetics. Separate toilet with shower. Berth provided with mattress and leeboards.

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### **3.19 AFT CABIN**

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One aft cabin with full privacy. Toilet to stb. Cabin provided with upper and lower berths, hanging locker and storage space. Berths provided with mattresses and leeboard. Curtains for side windows. Separate entrance from aft cockpit.

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## **4. PLUMBING**

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### **4.10 VENTILATION**

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Ventilation provided via hatches and port holes. See accurate specification at 2.13.

Standard Dorade ventilators mounted on boxes with water traps. For locations see deck layout, two on mid deck for forward guest cabins, two for main saloon and one on aft deck for aft cabin. Built in ventilators in coamings for owner's cabin. Electrical ventilator in toilets. Exhaust fan in galley above stove.

Engine room blower provided.

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### **4.11 WATER SYSTEMS**

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Water heater provided. Heater capacity is approx. 45 l. Heated by engine cooling water and shore power.

Water pressure system with outlets in heads and galley. Pump with automatic pressure switch. Telephone type shower, water faucet for cold and hot pressurised water. Foot-operated fresh- and salt-water pump in galley, foot-operated freshwater pump in heads.

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### **4.12 BILGE PUMPS**

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Two diaphragms type manual bilge pumps with removable handles. Locations, one at main companionway and one in the aft cockpit. One self-priming 24 V DC heavy duty bilge pump with automatic switch.

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### **4.13 TANKS**

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All tanks are Baltic custom made in stainless steel with baffles and inspection covers.

approximate capacities:

- diesel fuel 400 litres (105 US gallon)
- fresh water 800 litres (211 US gallon)

All tanks are pressure tested.

Tank shut-offs provided. A waterseparator is installed on the fuel line. The fuel tank has a deck fill marked FUEL. The fill fitting is grounded via the tank to a keel bolt.

The fresh water tanks have deck fill marked WATER.

Tank meter with selector switch on electrical panel.

The tanks are securely laminated to the hull and foamed in for rigidity and sound insulation.

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#### **4.14 PIPING**

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Seacocks and through hull fittings :

High quality seacocks and through hull fittings of marine standard. All through hull fittings located below the waterline are provided with seacocks.

Sea/fresh water, sanitary and fuel pipes :

Adequate vinyl piping for fresh water and sea water system. Sanitary hose are especially made for toilet application and with a rigid vinyl helix for reinforcement. Copper tube fuel lines with appropriate valves.

Hydraulic pipes :

Parker type reinforced hose with stainless steel end fittings

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### **5. ENGINE AND POWER TRANSMISSION**

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#### **5.10 MAIN ENGINE (Preliminary)**

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The main engine is a YANMAR 4JH2-UTE diesel with following characteristics:

- 73.5 kW (100 hp) at 3600 rpm
- 4 in-line vertical cylinders, 4-stroke engine
- direct injection.
- electrical starting 12 V DC

Fresh water cooling for marine application with a heat exchanger and a sea water pump.

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### **5.11 ALTERNATOR**

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80 A 12 V for starting batteries  
175 A 24 V for service batteries

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### **5.12 ENGINE INSTRUMENTS**

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Engine instrument panel with a RPM meter, a low pressure alarm, a high temp alarm and a starting switch. One engine hour meter is located at the nav. station on the main panel.

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### **5.13 GEAR BOX AND CLUTCH**

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Reduction gear box with reverse gear, reduction is 2.72:1. Internal thrust bearing in gear box.

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### **5.14 PROPELLER SHAFT**

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The propeller shaft is made of corrosion resistant steel AISI 329 The outboard end is supported with a stainless steel IOR-type shaft strut including rubber bearings. The stuffing box has a hose connection to the stern tube. Zinc anodes and a mechanical propellerstop are installed on the shaft.

Propeller :

Two-blade feathering propeller

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## 6. MAST AND RIGGING

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### 6.10 MAIN MAST

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Three-spreader racing/cruising type mast. The spar is made from a hollow oval aluminium section and provided with aluminium airfoil spreaders. The halyards are internal and the mast will be provided with appropriate exits, halyard blocks and fittings. The mast is equipped with track for full batten mainsail cars.

The mast will be white painted for protection.

Special emphasis has been taken to design a mast section with higher moment of inertia, fore and aft, than a racing spar. This is in order to minimise the need for use of running backstays in a cruising situation but still allow enough mastbend for racing.

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### 6.11 BOOMS

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Main boom is a tapered aluminium alloy hollow section with appropriate fittings, rollers and cables. The slab reef system with reefing lines runs through sheaves in boom end. The port and starboard reefing lines lead aft to center cockpit trim winches via turning blocks.

One aluminium spinnaker pole, hollow section, with shotgun type outboard end and stud fitting on the inboard end.

One reaching strut

Booms will be white painted for protection.

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### 6.12 STANDING RIGGING

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Standing rigging is rod and the transverse rigging arrangement is discontinuous. All fittings like shroud attachments, linking at spreader ends are carefully chosen to meet requirements like lower windage and light weight. All fittings are of a high fatigue type for higher safety, strength and durability.

1 Headstay	Rod
1 Backstay	Rod
2 V3/D4 Upper shrouds	Rod
2 D3 Upper diagonal intermediate shrouds	Rod
2 V2 Vertical intermediate shrouds	Rod
2 D2 Lower diagonal intermediate shrouds	Rod
2 D1 Lower shrouds	Rod
2 V1 Main shrouds	Rod
2 Running backstays	1x19 s.s. wire with Spectra tail
1 Babystay	1x19 s.s. wire .w mechanical tensioner

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### **6.13 RUNNING RIGGING**

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Running rigging is made of 7x19 stainless steel wire plus terylene tails as appropriate. Pad eyes are all Baltic Yachts custom made.

Item :

- 1 main halyard, with screwshackle
- 1 main sheet
- 2 main traveller adjusting sheets
  
- 2 genoa halyards, with snapshackles
- 2 genoa sheets
- 2 light sheets
  
- 2 spin halyards, with snapshackles
- 2 spin sheets, with snapshackles and ring
- 2 spin aft guys, with snapshackles and shackle guard
- 1 spin toplift, with snapshackle
- 1 spin foreguy, tackle 2 : 1 with block on boom end
  
- 2 reefing lines
- 1 cunningham line
- 1 kicking strap (preventer)

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### **6.14 HYDRAULICS**

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Following rig functions are provided with Navtec hydraulic cylinders and operated from a central panel in aft cockpit.

- backstay
- boomvang
- outhaul/flattening reef
- separate hydraulic system for the mast jack at the mast step arrangement

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## **7. ELECTRICAL AND ELECTRONICS**

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## **7.10 MAIN SWITCHBOARD**

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Baltic Yachts custom made with automatic safety circuit breakers. Indication diodes, amp.meters, volt meters and tank level meters are provided. A 12 V DC for starting system, 24 V DC for service system.

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## **7.11 BATTERIES**

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All batteries are heavy duty deep cycle marine type of the following capacities:  
(approx.)

- main engine starting battery 12 V DC  
108 Ah
- service batteries 24 V DC 786 Ah

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## **7.12 AC SYSTEM**

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Custom made high voltage electrical system for 220V 50 Hz or 110V 60 Hz powered from shore connection and DC / AC inverter approx. 2 kW. System including panel with automatic safety circuit breakers, powering all AC units and outlets in toilets and galley. System also includes battery charger for charging service batteries.

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## **7.13 LIGHTING**

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Following lights are provided:

Interior :

- navigator's light
- dome light red/white at nav. station
- dome lights white in ceiling
- fluorescent lights white
- reading lights white
- foot lights red
- indirect light in saloon with dimmer
- lights in all hanging lockers
- lights in refrigerator and freezer compartments

Exterior :

- pair bow lights red/green
- stern light white

- steaming light white
- tricolour masthead light
- anchor light
- deck flood light
- compass light
- boom light for center cockpit

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## 8. STEERING SYSTEM

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The steering is provided by a light weight "destroyer type" wheel. The wheel is leather covered made of stainless steel, welded and highly polished. Baltic Yachts custom made pedestal. The steerer has sprockets and non magnetic chains leading to steering cables. The steering cables are stainless steel wire and the cable sheaves have a score diameter of not less than 20 times the wire diameter. The steering sheaves are mounted on brackets securely bonded to the structure.

One aluminium alloy tube emergency tiller, storage in cockpit locker.

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## 9. MISCELLANEOUS

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### 9.10 EQUIPMENT

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Following items will be provided:

- steering compass, SUUNTO D-165 mounted on steering pedestal.
- 8 fenders
- flagstaff
- bosuns chair
- boat hook
- 4 docking lines
- instruction manuals for engine, plumbing and electrical system
- tool set for small onboard repairs
- service spare part kit for rig, plumbing, engine and electric's
- ORC safety kit including flares
- windex
- clinometer

A drop forged galvanised bow anchor, Danforth type, is provided.  
Galvanised steel chain 10 mm and 50 m anchor warp.

#### **NOTE:**

**These specifications are believed to be correct at the time of printing. However, there may be changes and alterations to the finished yachts thanks to continuous improvements. Baltic Yachts therefore reserves the right to amend specifications,**

**materials and equipment without prior notice. Alterations will not be considered retroactive for yachts already delivered or under construction.**

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